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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,222	12/31/2003	Valerie Guralnik	256.186US1	6645
21186	7590	06/26/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.			BHAT, ADITYA S	
P.O. BOX 2938			ART UNIT	
MINNEAPOLIS, MN 55402			PAPER NUMBER	
			2863	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/750,222	Applicant(s) GURALNIK ET AL.	
	Examiner Aditya S. Bhat	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/6/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

With regards to claims 1-28 and 30 the methods recited in the claimed invention do not produce a real life, real world, useful, concrete, and tangible result.

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)).

A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See In re Warmerdam, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also Schrader, 22 F.3d at 295, 30 USPQ2d at 1459. Nor can one patent "a novel and useful mathematical formula," Flook, 437 U.S. at 585, 198 USPQ at 195; electromagnetism or steam power, O'Reilly v. Morse, 56 U.S. (15 How.) 62, 113-114 (1853);

Please view the following guidelines to overcome 35 U.S.C. 101 rejection made in this office action.

<http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Qin et al. (USPN 6,594,620).

With regards to claims 1 and 16, Qin et al. (USPN 6,594,620) teaches a system and method of identifying events in a process, comprising:

running a principal component analysis model on sensor data from the process;  
calculating statistics related to the model; (Col. 2, lines 60-63)

determining if an event is occurring; (Col.3, lines 10-13) and

finding a nearest cluster of bad actors related to the event to identify the event.  
(Col.3, lines 10-13)

With regards to claims 2 and 17, Qin et al. (USPN 6,594,620) teaches a nearest cluster of bad actors comprises comparing the bad actor vectors to known clusters in a library of clusters for bad actors. (Col. 2, lines 42-44)

With regards to claims 3 and 18, Qin et al. (USPN 6,594,620) teaches identifying a sequence of cluster matches; and correlating the sequence of cluster matches to known events. (Col.6, Lines 29-41)

With regards to claims 4 and 19, Qin et al. (USPN 6,594,620) teaches determining if a cluster needs to be split when new bad actors are added; and splitting the cluster into two clusters using a goodness of fit algorithm. (col. 19, lines 1-2)

With regards to claims 5 and 20, Qin et al. (USPN 6,594,620) teaches determining if a new event category is encountered; and broadening limits for the sequence of clusters. (col. 5, lines 30-41)

With regards to claim 6, Qin et al. (USPN 6,594,620) teaches a cluster is limited to a predetermined number of bad actors. (Col. 25, lines 14-17)

With regards to claim 7, Qin et al. (USPN 6,594,620) teaches the predetermined number of bad actors is ten. (Col. 8, line 50)

With regards to claims 8 and 21, Qin et al. (USPN 6,594,620) teaches the statistics comprise Q (residual error) (Col. 18, line 63) and T2 (unusual variance)(Col. 3, line 32).

With regards to claims 9 and 22, Qin et al. (USPN 6,594,620) teaches using a feature scoring scheme to identify top contributors of bad actors. (col. 2, lines 42-43)

With regards to claims 10 and 23, Qin et al. (USPN 6,594,620) teaches the feature scoring scheme is based on rank, value, and percent of contribution to a Q-residual sensor to identify a relative importance. (col. 2, lines 42-44)

With regards to claims 11 and 24, Qin et al. (USPN 6,594,620) teaches the top-contributors are determined based on a majority percentage of the Q-residual. (col. 2, lines 42-44)

With regards to claims 12 and 25, Qin et al. (USPN 6,594,620) teaches the top-contributors are determined based on only the contributors with absolute values that are drastically different from values of other contributors. (col. 2, lines 42-44)

With regards to claims 13 and 26, Qin et al. (USPN 6,594,620) teaches the scoring scheme is based on predetermined limits. (col. 2, lines 42-44)

With regards to claims 14 and 27, Qin et al. (USPN 6,594,620) teaches the limits are computed statistically through change point detections. (Col. 2, lines 54-55)

With regards to claims 15 and 28, Qin et al. (USPN 6,594,620) teaches a predetermined minimum/maximum number of contributors are selected from rank, value, and percent of contribution to a Q-residual sensor to identify a relative importance. (col. 2, lines 42-44)

With regards to claim 30, Qin et al. (USPN 6,594,620) teaches a method of identifying events in a process, the method comprising:

running a principal component analysis model on sensor data from the process calculating statistics related to the model; (Col. 2, lines 60-63)

determining if a process event is occurring as a function of one or more process states being outside of normal range; (Col.3, lines 10-13) and

finding a nearest cluster of bad actors related to the process event to identify the process event. (Col.3, lines 10-13)

***Response to Arguments***

Applicant's arguments filed 5/22/2006 have been fully considered but they are not persuasive.

Applicant is reminded that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

In this instance applicant argues that the specification describes that events in a process are identified, applicant goes on to argue that the invention is not directed specifically at identifying a bad sensor, but rather identifying an event in the process as recited in the claims, applicant goes on to argue that claim 30 recites that events are determined as occurring "as a function of one or more process states being outside of normal range."

In response to applicant's argument it should be noted that the meaning of "process" as defined be Merriam Webster dictionary is "a series of actions or operations conducing to an end" and the definition of the term "event" is "something that happens", an occurrence . During examination the plain meanings of these words as defined by the dictionary have been used in order to determine the scope of the claimed invention. Therefore the rejection is deemed proper.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S. Bhat whose telephone number is 571-272-2270. The examiner can normally be reached on M,T,TH between 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aditya Bhat  
June 15, 2006

BRYAN BUI  
PRIMARY EXAMINER

